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Purpose:		X Work Assig	nment		Work Assignment (Close-Out		Period of Performance			
Work Assignment Amendment Incremental Funding Work Plan Approval								From 01/01/2018 To 12/31/2018			
Comments:								•			
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prepare the work plan $\&$ cost estimate and to begin the WA. See the attached SOW. This work does not duplicate any previous or current work.											
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Work Assign	nment M	anager Name	Janise Pa	lmer			Bra	Branch/Mail Code:			
		Ü						Phone Number: 202-343-9921			
		(Signa	ture)					AX Number:			
Project Office	cer Nam	e Annette	-		Branch/Mail Code:						
								Phone Number: 202-343-9489			
(Signature) (Date)								FAX Number:			
Other Agen	ncy Offici		-/	_	Branch/Mail Code:						
	- '				Phone Number:						
(Signature)				(Date)				FAX Number:			
Contracting Official Name Christian Ford-Cannon							_	Branch/Mail Code:			
12/21/17								Phone Number: 919-541-2147			
	(Signature)						FAX Number:				
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WORK ASSIGNMENT

CONTRACTOR: Scientific Consulting Group, Inc.

CONTRACT NUMBER: EP-D-14-001

WORK ASSIGNMENT NO: 5-4

WORK ASSIGNMENT TITLE: Quality and Standards for Healthy Buildings

WORK ASSIGNMENT

CONTRACTING OFFICER Jani Palmer

REPRESENTATIVE: Indoor Environments Division (IED)

Mail Code: 6609-T

1200 Pennsylvania Ave., N.W.

Washington, DC 20460

(202) 343-9921

Palmer.Janise@epa.gov

ALTERNATE CONTRACTING

OFFICER REPRESENTATIVE: Thomas Bowles

Indoor Environments Division

Mail Code: 6609-T

1200 Pennsylvania Ave., N.W.

Washington, DC 20460

202-343-9130

bowles.thomas@epa.gov

LEVEL OF EFFORT: hours

PERIOD OF PERFORMANCE: 01/01/2018 through 12/31/2018

I. BACKGROUND

Title IV of the Superfund Amendments and Reauthorization Act of 1986 (SARA) gives EPA broad authorization to address indoor air quality. The Indoor Environments Division (IED) is responsible for implementing national policies on indoor air pollution and protecting the public from related health impacts, such as radon, childhood asthma, environmental tobacco smoke and more.

Public demand for knowledge about indoor environmental problems, including their health risks and the means by which human exposure can be reduced, has been fueled by a growing body of scientific information confirming the adverse health impacts of radon and other indoor pollutants. The Radon Program of the Office of Radiation and Indoor Air (ORIA) in the Environmental Protection Agency (EPA) recognizes the need for a variety of audiences to understand these risks and to be informed about available methods risk reduction. As a voluntary program, two main objectives of the Radon

Programs are disseminating information and conducting education and outreach activities via meeting and conferences that inform a broad range of constituents; these being the general public, building design, construction, and management professionals, private sector diagnostic, and mitigation firms, industry associations, environmental researchers, and experts, indoor environmental educators, EPA program partners, public health, and advocacy organizations, health practitioners, and environmental health officials at Federal, State and local levels.

Contractor support is required to ensure that appropriate and effective product design and revision, issue research and analysis, and meeting and conference support are received by the EPA Radon Program in a timely and cost-effective manner. In carrying out support activities under this work assignment, the contractor is to refrain from either developing or interpreting EPA policy, and is to communicate only those policies conveyed by EPA for dissemination to customers. Contract personnel are to identify themselves in all dealings with the public (written and oral) as contractors to EPA who are providing an information distribution service. Finally, the contractor shall conform to all requirements regarding printing and duplication materials as defined in Title 1 of U.S. GPO Government Printing and Binding Regulations, No. 25, November 1987.

In meeting the requirements of this work assignment, the contractor shall be in a support role and will NOT be involved in the development of EPA policy, nor in any other activity that is an "Inherently Governmental function."

This work will be completed in accordance with the Information Quality Act/Information Quality Guidelines, and the Environmental Protection Agency's peer review guidance, as required. The links to these guidelines are: http://www.epa.gov/quality/informationguidelines/index.html.

The work addressed under this work assignment is a continuation of work completed under Contract EP-D-14-001, Work Assignment 4-4.

II. TASKS

Task 1 Provide Budget and Technical Approach

As needed and requested by WAM, the contractor shall provide technical approach with detailed information on the contractor's approach for accomplishing each project, including a schedule of deliverables, staffing plans, with statements of experience, estimated labor hours and cost. Technical approval and budget documents are required within 20 calendar days of the effective date of the work assignment.

No work shall begin on this Work Assignment until Technical Direction is received from the EPA WAM.

Task 2 Guidance and Technical Meetings

The contractor shall attend no more than five in person meetings with EPA WAM to receive EPA guidance and discuss technical issues regarding all tasks indicated. Each meeting shall be approximately one to two hours in duration. The meetings will take place either at the contractor's office or at the EPA WAM's office (Washington, DC). Times and dates to be determined by WAM through technical direction.

Deliverables:

The contractor shall attend no more than five overall guidance and technical issues meetings with WAM. Upon direction by WAM, the contractor will prepare and deliver reports and/or summaries of meetings no more than two pages in length within five business days of the meeting.

Task 3 Radon Program Meetings/Conferences Applicable SOW Sections: D2(c,l) & E2

Task 3a. Standards Committees. The contractor shall provide logistical and administrative support in planning and implementing up to 60 Radon Program meetings, workgroups, conference calls, webinars, etc. as directed. Support includes organizing meetings with standards committee members, keeping and sharing notes and minutes, and compiling comments. The subject of these meetings include radon resistant new construction, mitigation and testing in vapor intrusion projects, quality assurance for radon measurement systems, chamber intercomparisons for standards, testing and mitigating radon, measuring and mitigating radon in water, and radon in green building standards. Possible projects include the following:

- MS-QA Quality Assurance for Radon Measurement Systems
- MW-RN Radon Measurement in Water
- RMS-W Radon Mitigation in Water
- CCAH 2013 New Construction of Homes

Task 3b. Codes Meetings. The contractor shall provide logistical and administrative support in planning and implementing up to 20 codes meetings, workgroups, conference calls, webinars, etc. as directed. Support includes organizing meetings with stakeholders, keeping and sharing notes and minutes, and compiling comments. Themes include building with radon-resistant features, ICC-700 testing for radon proposal, and the crosswalk between radon, energy and ventilation codes.

The contractor shall provide conference fees, travel and lodging support for two technical experts to participate in the 2018 Committee Action Hearing, April 5-25 (include two days), in Columbus, OH, and in the Public Comment Hearing October 24-31 (include two days), in Richmond, VA. No remuneration or honorarium or payment for services will be included.

The contractor shall provide travel and lodging support for three technical experts to participate in the Radon Codes Summit, in July, and location TBD. No remuneration or honorarium or payment for services will be included.

Task 3c. Cost and Risk Numbers. The contractor shall provide logistical and administrative support in planning and implementing up to 15 Radon Program meetings, workgroups, conference calls, webinars, etc. as directed for cost-benefit analysis and updated risk assessment.

Task 3d. Structural Effects on Radon. The contractor shall provide logistical and administrative support and expert representation in planning and implementing up to five meetings, workgroups, conference calls, webinars, etc. as directed for the BARRIER plus Expanded (BEX) Study. Support includes organizing meetings with stakeholders, keeping and sharing notes and minutes, and compiling comments for the BEX study and other weatherization and radon/energy studies.

Task 3e. National Meeting/Symposium. The contractor shall provide conference fees, travel and lodging support for two experts for participation as needed for training and radon technical expert representation at the Radon National Meeting (one expert), September 10-12, in Lexington, KY; and at the AARST Symposium (one expert), September 30-October 3 (include 2 days), in Myrtle, SC. No remuneration or honorarium or payment for services will be included.

Deliverables:

The contractor shall provide support (e.g., agenda development, prospective participant identification and invitation, meeting minutes, and other similar activities) for up to 100 radon program meetings for codes, standards, cost benefit, risk assessment and structural effects. Events will typically last from one to two hours.

Events known at this time include:

Administrative support for final production of standards by December:

- MS-QA Quality Assurance for Radon Measurement Systems
- MW-RN Radon Measurement in Water

Administrative support for draft production of standards by December:

• RMS-W Radon Mitigation in Water

Administrative support for continuous maintenance of standards by December:

CCAH 2013 New Construction of Homes restructuring

Travel and lodging support for technical experts to attend the following conferences or meetings:

- ICC Committee Action Hearing, April 5-25 (include two days), in Columbus, OH
- Radon Codes Summit, date & location TBD (Tentative in CO).

- Radon National Meeting, September 10-12, in Lexington, KY.
- AARST Symposium, September 30-October 3 (include 2 days), in Myrtle, SC
- ICC Public Comment Hearing, October 24-31 (include two days), in Richmond,
 VA

Task 4 Radon Research and Technical Analysis Applicable SOW Sections: B2(a,c,e,f), C2(a,b,e), D2(b,f,g,m,n,q)

Task 4a. Standards Committees Technical Support. The contractor shall provide research, technical writing and analysis services on standards subjects listed in Task 3a and new radon guidance and supplemental documents by December 2018. Possible projects include the following:

- MW-RN Radon Measurement in Water (in draft)
- RMS-W Radon Mitigation in Water (new standard)
- Traceability to NIST Best Practices Guidance Document for Laboratory Systems (new guidance document for supplementing QA system)
- High-rises Design for Radon, Energy and Ventilation Best Practices Guidance Document (new guidance for supplementing CC-1000)
- CCAH 2013 New Construction of Homes (scheduled maintenance update that requires significant changes)
- Harmonization of ISO and ANSI/AARST Standards

The contractor shall provide conference fees, travel and lodging support for one technical expert to participate in the ISO Technical Committee 146/SC 5, February 19-23, in Berlin, Germany. No remuneration or honorarium or payment for services will be included.

Task 4b. Codes Technical Support. The contractor shall provide research, technical writing and analysis services on code changes that reduce radon risk, such as but not limited to, radon resistant new construction in the international residential and commercial/large building code, and in the green code and themes related to the crosswalk between radon, energy and ventilation codes by December.

This task includes services to produce and deliver radon code educational sessions and informative radon codes documents to codes stakeholder audiences such as builders, building officials and building scientists and to participate in the annual ICC educational conference, building science "Summer Camp" and radon codes summit by December.

This task includes services to elucidate liability issues for builders around radon risk, and consult on code language for code proposals.

Task 4c. Cost and Risk Technical Support. The contractor shall provide research, technical writing and analysis services on cost-benefit analysis and risk assessment. The nature of this service shall be identifying sources of information, obtaining, compiling, and performing quantitative and qualitative analysis of identified information,

providing technical support and production of written hardcopy or electronic summaries, and finalizing white papers and manuscripts by September.

Task 4d. Structural Effects on Radon Technical Support. The contractor shall provide research, technical writing and analysis services on the BEX weatherization study by August and on Building American Radon study by March and on High-rises study by December.

Deliverables:

Research, technical writing and analysis for final production of standards by December:

- MW-RN Radon Measurement in Water
- Traceability to NIST Best Practices Guidance Document for Laboratory Systems
- High-rises Design for Radon, Energy and Ventilation Best Practices Guidance Document

Research, technical writing and analysis for draft production of standards by December:

• RMS-W Radon Mitigation in Water

Research, technical writing and analysis for continuous maintenance of standards by December:

CCAH 2013 New Construction of Homes

Production and delivery of radon codes educational sessions at the Annual ICC Meeting TBD, Summer Camp (draft), and Radon Codes Summit by December.

Production and publishing of two technical manuscripts in approved format based on the updated benefit/cost analysis and risk scoping by September.

Production of a preliminary data report for BEX by August.

Production of a study plan and quality assurance project plan (QAPP) for radon in high rises study by December.

Production of a study plan and quality assurance project plan (QAPP) for radon in the Building America study by March.

Task 5. SCHEDULE & DELIVERABLES

Task	Deliverable	Due Date		
1.0	Prepare and deliver budget and technical approach	Within 20 calendar days of the effective date of the work assignment		
2.0	Guidance & Technical Meetings	lanuary-September 2018– up to 5 meetings as lirected by WAM		

Task	Deliverable	Due Date			
3.0	Provide Meeting/Conference Support	Attend ICC Committee Action Hearing, by April. Attend Radon National Meeting, by September. Attend AARST Symposium, by September. Attend ICC Public Comment Hearing, by October. 100 program meetings as directed by December. Attend Radon Codes Summit by December.			
4.0	Research and Analysis of radon topics/issues	Participate in ISO Technical Committee 146/SC 5 by February			
		Building America study plan and QAPP by March			
		BEX report by August.			
		Final manuscripts for cost/benefit and risk by September.			
		Research, technical writing and analysis for standards by December.			
		Delivery of educational sessions by December.			
		High-rises study plans and QAPP by December			
5.0	Master and an archive copy of all deliverables and drafts	December 31, 2018.			

IV. GENERAL

The contractor shall provide the WAM with a master and an archive copy of all deliverables and drafts. Associated disks compatible with ORIA equipment (MS Word for basic reports and documents, PageMaker for those items which will be published and .HTML format for those items which will be inserted in EPA's website, Excel or Access for spreadsheets and/or databases) must also be provided upon completion of the work assignment by December 31, 2018.

The contractor shall meet with the WAM at the contractor's or WAM's location of business or by phone once a month as indicated by the WAM by Technical Direction.

Final deliverables status report shall be submitted in hard copy with a master and archive copy in electronic form.